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Digital Portfolio Use in the First-Grade Classroom: Perceptions of Seesaw

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Abstract

In this study, the researcher discusses the use of a digital portfolio application, *Seesaw*, that is used in her first-grade classroom. During her clinical teaching year, her cooperating teacher was using *Seesaw* as a digital portfolio. She formed a question that focused on student and teacher perceptions. When building her study, she began by conducting a survey to understand initial feelings towards *Seesaw*. After this, the researcher conducted two focus groups, three student interviews and one interview with the classroom teacher. The researcher kept a teacher journal to keep a daily reflection. Additionally, screenshots were taken of submissions as data. The researcher concluded that higher engagement and excitement to learn appeared while students used the *Seesaw* application. This was due to positive perceptions of *Seesaw*, as well as the ability to recall lessons and activities done on the application from the beginning of the year.

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When asked about the importance of using *Seesaw*, Kevin stated, "It's also funner to do on the iPad than on paper because if you wrote it down, it would take more energy than just talking." Kevin was exactly right. (All names are pseudonyms.) Talking uses a lot less energy than writing something down. Additionally, being able to search for student work that was done in the beginning of the year on *Seesaw*, a digital portfolio platform that allows students to add work done in the classroom, takes a lot less energy than searching through the abundance of papers that a teacher might find on his or her desk.

Teachers all over the world can understand the amount of papers that students turn in for a grade or for feedback. Not all teachers do their grading at the school building; so often, teachers have to pack up a big folder, binder, or notebook that is full of papers to grade and return. Often times, it can seem like another paper is being sent home to parents with a grade or a check on it. What if there was some way for teachers to minimize the amount of papers that they needed to keep track of in their travels from school to home and back to school? In fact, there is a way to minimize papers in that heavy teacher tote bag that they bring home. It is called a digital portfolio.

Abrami et. al (2013) defined a digital portfolio as "a digital container capable of storing visual and auditory content, including text, images, video, and sound" (p. 1189). A digital portfolio has many great uses, but one use is that students can upload their work to the portfolio for teachers to grade without the paper physically in front of them. Another great use is that with some digital portfolio platforms, the teacher can give immediate feedback to the student through his or her submission. Throughout this study, I was a clinical teacher and a graduate student working to obtain my Master's in Teaching and Learning. In the classroom that I was clinical teaching in, we used a digital portfolio application called *Seesaw*. This application is used in

more than half of the schools in the United States and in over 200 thousand classrooms ("About Seesaw", n.d.). It can be used for different things, but in our classroom, students were able to submit their work and file it under a specific folder based on the subject the work was from. This allowed my cooperating teacher and I to look through their work without the need to take home all 20 science journals and or all 20 math papers that the students turned in. Our students had the opportunity to look back on what they have submitted and see what they had done throughout all of first grade, which increased student self-reflection and encouraged students to see their growth throughout the year.

Purpose

The purpose of this study was to gather student and teacher perceptions about the use of digital portfolios in a first-grade classroom. Roosevelt Elementary School is on the south side of a small rural city in West Texas. The school district serves approximately 16,500 students. There are thirteen other elementary schools in the district. Roosevelt Elementary serves between 550 and 600 students each year. The majority of these students are White or Hispanic with the rest of the students being Black, Asian, or two or more races. The investigator was curious to see what the students in my first-grade classroom liked, what they disliked, what they would improve, and what they thought in general about *Seesaw*. To investigate perceptions, the following research question guided the data collection and analysis:

- What are student and teacher perceptions of the use of the *Seesaw* application as a digital portfolio in a first-grade classroom at Roosevelt Elementary School?

Literature Review

Many teachers are faced with the task of keeping track of all or most assignments done by their students. Teachers will often turn to portfolios to keep all of these papers organized. Simply stated, "portfolios function as cumulative files of students' ongoing, purposeful work and

reflect changes in students' performances as readers and writers over time" (Hillyer & Ley, 1996, p.149). With a traditional paper portfolio system, full folders turned into full cabinets which could eventually turn into full storage units (Niguidula, 1997). However, with the increasing development of new technologies, a digital portfolio, also called an electronic portfolio, helps to minimize the ever-growing piles of papers on a teacher's desk. A digital portfolio (DP) is a way to document student work and learning done throughout the year and for a student to be able to look back at it (Parnell & Bartlett, 2012). It is a singular place for work done throughout all of school (Barrett, 2007). When work is stored in one singular place, students are able to look back and reflect on their growth throughout the year.

Eventually, all of the " stuff" that teachers might have been keeping in their students' traditional portfolios would have become overwhelming and the idea of another way to store all of the work formed (Niguidula, 1997, p. 26). Integrating a DP in the classroom takes quite a bit of planning on both the school's and the teachers' parts. Without meticulous planning, a DP could become just another thing that teachers need to be incorporating into their daily lesson plans (Niguidula, 1997). No matter what, implementing a technological tool such as a DP requires both the students and the teacher to learn how it works. In a study done about the implementation of a DP in a school, the researchers found that teachers needed to be as willing to actively learn, reflect (both on their own and with others), and adapt to the technology as the students were (Barrett, 2007). Without this teacher engagement and desire to learn the technology with the students (Parnell & Bartlett, 2012), a DP will not work in a classroom.

It is important to note that there are many forms of digital or electronic portfolios (Plaisir, Hachey, & Theilheimer, 2011). The types of digital portfolios that teachers can use in their own classrooms include Fakebook, Google Classroom, Educreations, *Seesaw* and many others (Johns et. al, 2017). *Seesaw*, which is the platform that was used in the classroom in this study, is a

digital portfolio application that allows students to submit files, pictures, videos, voice recordings, etc. to document their learning and work that they have been doing in the classroom. To begin using *Seesaw*, the teacher creates a profile and then makes a class and adds in his or her students' names. Students are given access through a QR code and then are able to add items to their digital portfolios (Johns et. al, 2017).

Digital portfolios encourage students to self-assess, to learn subject matter on a deeper level, to take pride in their work that they complete, and to set goals based on what is already in their portfolio (Abrami et. al, 2013). In addition, the digital portfolio adds the easy accessibility to view student work rather than sorting through stacks of papers. Students who have used DPs in the past have been able to have a sense of ownership over how their portfolio looks and runs. In fact, through the use of these digital portfolios, students were able to learn self-regulation skills that resulted in deeper learning and higher quality of work (Abrami et al., 2008).

Often times, it is hard for teachers to keep their students engaged with the constantly developing technologies of today's society. Teachers find it hard to compete with social media, video games, smartphones, tablets, etc. Digital portfolios are a way to bring technology into the classroom in a way that keeps the student engaged. In a study conducted by Barrett (2007), student engagement increased when a digital portfolio was implemented into the classroom. However, it was also clear that the teacher's buy-in is just as important. If the teacher was not engaged, the researcher found that the digital portfolios lacked much of what they were looking for. When the teachers were more engaged in the technology, the digital portfolios were robust and full of student work that displayed what they had been doing in the classroom (Abrami et al., 2008).

The literature on digital portfolios is robust. While there are many studies already done on digital portfolios in the classroom, this study will be unique because the data will be based on

student and teacher perceptions and focused on the use of *Seesaw* in a first-grade classroom. This study will add to the preexisting literature because the entire focus is not on how the digital portfolio is impacting the students in an academic way. Rather, this study is all about how students and a first-grade teacher like or dislike using *Seesaw* in the classroom. This will be informative for teachers wanting to know how a student views using a digital portfolio as a storage container of work done throughout the year. It will also be informative to teachers who are wishing to implement a form of digital portfolio into their own classroom.

Methods

Below is a description of the different methods used in the study to select participants and collect and analyze data in the next section. It is important to note that the clinical teacher acted as a teacher-researcher, as well as a participant who interacted with the application on a daily basis and allowed students, as well as the cooperating teacher to freely express all opinions about the use of *Seesaw* as a digital portfolio.

Participant Selection

The participants of this study included a single classroom of twenty first-grade students and one classroom teacher, as well as myself, the clinical teacher. I sent home a parent information letter and consent form, and the students were asked to sign an assent form. All twenty students in the class gave assent and had parent permission and consent to participate in the study. Thus, there were 13 male students and 7 female students participating. Fourteen of the students were Caucasian, four of the students were Hispanic or Latino, one of the students was Black and one student was Asian. The classroom teacher was a Caucasian female.

Data Collection

As an introduction into the study, all students who received parent permission and assented to participate completed a survey with four questions about their feelings toward using

the application in the classroom to which they responded with either “I hate it,” “I don’t like it,” “I like it,” or “I love it!” (see Appendix A). There was an additional open-ended question where students were able to write a sentence about what they liked or disliked about using *Seesaw*. Each question included picture cues in order to reach all students and their learning needs. These surveys served as baseline data (Hubbard & Power, 2003) and guided my decision making on which students to place in my focus groups and individual interviews.

Once all surveys were analyzed using the constant-comparative method (Hubbard & Power, 2003), I used purposive sampling (Patton, 1990) to create two focus group interviews made of four students each. One group had generally positive attitudes towards the use of *Seesaw* and one had generally negative or neutral attitudes towards the use of *Seesaw*. These focus groups lasted approximately fifteen minutes. After the focus group had been completed, I held one-on-one interviews with three students based on their responses from the surveys and their participation in the focus group. Each student had a different attitude towards using *Seesaw* in the classroom. These individual interviews lasted between 10 and 15 minutes. Additionally, I interviewed the cooperating teacher individually for 20 minutes. She did not have to complete the survey that was given to the students, but she did have to fill out an adult consent form. All of the interviews followed a semi-structured format which allowed the researcher to ask questions as they arose throughout the interview. All interviews were also audio recorded and transcribed for data analysis.

During the three weeks of data collection, the researcher kept a teacher journal that included a tally of how often the digital portfolio was used and what subject or topic it was being used for in the classroom. At the end of each day, time was spent reflecting on how the use of *Seesaw* went that day. Most of the reflections included specific interactions or activities that the researcher had seen the students do with the application.

Ten screenshots of the student submissions, such as their classroom job applications, activities related to what the class was learning, and work that was submitted during Daily 5 (Boushey & Moser, 2014), in the application served as document collection for the digital portfolio. These screenshots were from a sample of students and variety of folders that served as a way to organize students' work that was submitted on the application that the cooperating teacher created for the students. Two to three screenshots were collected for each folder my cooperating teacher had created for each subject that was used during the data collection period.

Data Analysis

The student surveys were analyzed using descriptive statistics (Hendricks, 2017). I tracked each student's answers to each of the questions that were based on the Likert-scale. I started by color coding based on their answers, and then organized it in a graph in order to see it in a more visual way (see Appendix A). The open-ended question at the end of the survey served as qualitative data and was analyzed with all other qualitative data. All qualitative data were analyzed using the constant-comparative method, with initial coding followed by creating hierarchies of categories and supporting codes (Hubbard & Power, 2003). I created level 1 codes that were comprised from the first 20 percent of my data. (Tracy, 2013). After this, I used a thematic analysis approach on the remaining 80 percent of the data to further find themes and create level 2 codes (Hendricks, 2017 ; Tracy, 2013). I kept a codebook (see Appendix B) which included the name of the code, a definition, an example, and the color I used in my data analysis. After this, I created a memo for each of my level 2 codes which allowed me to reflect on the code and its direct relationship to the research question.

Findings

Throughout the data collection and analysis period, several themes occurred throughout the data. The following paragraphs are descriptions of the overall themes through specific

examples from the data. These paragraphs concern interactions with the technology, engagement with the activities that are available within *Seesaw*, the teacher's role in using the application in the classroom, and overall emotions and attitudes of both the teachers and students related to using the application.

Interactions with the Technology

Throughout the three weeks of data collection, both the teachers and the students discussed specific types of interactions with the technology. These interactions included things such as how many different things you can do with *Seesaw*, how there are specific functions that you can do within the application, and the comparison of using the digital portfolio versus the paper form of a portfolio.

In each interview with both students and the teacher, some sort of technical language was used, which showed that students were aware of the parts of the technology that were used in the classroom. For example, in both the focus group and the individual interview, Andy mentioned the use of the AirDrop feature that is available on the iPad. In the classroom, the teachers used the AirDrop feature to send books to students during Guided Reading (Fountas & Pinnell, 2017). Andy was fully aware that, at times, AirDropping something to the students was necessary in order for them to be able to interact with *Seesaw*. He took the time to mention the AirDrop function in both the focus group interview and his individual interview, which caused the researcher to infer that he liked using that part of the technology, which in turn exhibited parts of his positive perceptions of *Seesaw* and the technology.

While Andy was aware of the AirDrop function of using *Seesaw*, the other students did not mention using AirDrop. However, they did use the language of uploading and downloading things to *Seesaw*. In fact, every student that was interviewed, except for David, used either the word upload or download at least once throughout the conversation. Erin said, "I like uploading

things from other apps and upload it to *Seesaw*." She specifically stated that she liked something about the application, but she did it in a way that used technological language. Students who used the language were showing that they had positive perceptions about the technology.

While students were using the application, they were taking pictures, typing words in notes, recording themselves, adding items to their journals, and taking videos. The use of these varied dependent upon the activity that they were completing. For example, when students were at my table during Guided Reading groups, we would use the typing function to practice the phonics patterns that we were discussing within that book. Perceptions of this varied. Some students seemed to enjoy having the chance to use the keyboard and type words, while other students tended to dislike typing, mainly because it "takes a long time." In the second focus group, Andy and Kevin discussed how they found typing "interesting" and exciting while Stanley and Kelly stated that they did not like typing because "it's pretty boring."

Students demonstrated knowledge of working with the technology through the successful submissions and their mostly positive perceptions of using iPads in the classroom. On the student surveys, two students wrote about how they liked getting to use the iPads. Andy mentioned that working on the iPad is a much more high-tech way to use the iPads. He described this as fun. In my teacher journal, I noticed how students were zooming in on the words during Guided Reading groups. Even though not all students did this, the students that did usually had a smile on their face as they looked to the clinical teacher while reading. Mrs. Knope stated that the actual application itself was very "user- and child-friendly," which was something that was important to her because she wanted to incorporate technology into the classroom even more this year.

Mrs. Knope was excited about using *Seesaw* due to its versatility. She was able to teach and do many things with just one application. There are options to add something the students

create and for students to complete activities that are already put on *Seesaw*. While content areas were mentioned as something you could use *Seesaw* for, teaching students responsibility with the technology was another. Students had a responsibility to submit things to their digital portfolios and to take care of their iPad as well so they could continue submitting things. With everything that *Seesaw* was used for, Mrs. Knope mentioned that she liked the fact that everything they submitted was all in one place.

One way for students to display their learning is through recording their own voice describing something. For the science activities completed during data collection, the students had to record about a specific topic such as soil samples and the water cycle. When completing leadership role applications, students were asked to submit a picture of their application and record themselves talking about why they would be good at that job. Andy enjoyed being able to save his own voice. In fact, all students except for Erin enjoyed having the opportunity to record their own voice talking about the activity. Mrs. Knope mentioned that the verbal reflection piece of using *Seesaw* is something she finds "super valuable with the digital portfolios that were not in a paper copy." Kevin, Stanley, Kelly, and Andy discussed that you cannot record your voice on a piece of paper, so they liked that they could record their voice on *Seesaw*.

Both students and the classroom teacher compared using a digital portfolio versus a paper portfolio. While students did not use the language of digital and paper portfolios, they mentioned how they enjoyed doing it on the iPad more than on a paper. When the second focus group began comparing paper portfolios and using *Seesaw,* Stanley said, "On the iPad, that is funner. It's a funner way to get a grade." He enjoyed receiving feedback through *Seesaw* and completing the assignments because it was more fun to him. I believe this is due to the activities on *Seesaw* being more engaging to the students since it was something that they have never done in school before this year. Mrs. Knope enjoyed not having to keep up with as many paper copies of work

since it was submitted on *Seesaw,* and she could access it by using anything that she had logged into *Seesaw*.

Engagement with the Activities Available

Overall, using *Seesaw* in the classroom appeared to boost student engagement with the content material. Every student that was interviewed mentioned at least one activity that we had done previously in the year on *Seesaw*. Additionally, students enjoyed the idea of being able to look back at what they had done in the beginning of the year and how they had grown throughout the year. Most frequently, the application was utilized during the Daily 5 Rotations in Guided Reading groups and Word Work. Boushey and Moser (2014) developed the Daily 5 Rotations as a way for teachers to engage their students in higher reading skills through a workshop model of students being in different rotations that would boost their reading, writing, and phonics skills. In this classroom, Guided Reading (Fountas & Pinnell, 2017) was one of the rotations for this time. In the second focus group, a discussion about reading on *Seesaw* occurred when asked what their favorite subjects to use *Seesaw* for was. The following is an excerpt from that interview:

> Stanley: I like the reading too because we read like really cool books like Yellowstone and the Grand Canyon. Those are really cool.
>
> Kevin: Uh, I like reading too because like you can like – it's really cool because you can find – because it's kind of mixed together with science and history because you can find books that are science and history stuff.

The students enjoyed being able to read the books on *Seesaw*. The books that they read on *Seesaw* only occurred during Guided Reading. In the teacher journal that was kept, the clinical teacher wrote, "I love reading on the *Seesaw* app with my Guided Reading groups! It is so much fun!" Both the students and the teacher enjoyed using the application for Guided Reading.

Students were most engaged with the activities. Students were able to recall specific activities and lessons that we utilized *Seesaw* for. In each interview, some sort of science lesson was mentioned. The frequency of the mention of science activity was due to the hands-on nature of science in this classroom and the clinical teacher's inclusion of activities for science on *Seesaw*. The activities we did without *Seesaw* engaged the students; however, the activities done with *Seesaw* tended to be the most mentioned. For example, the students mentioned using the application while investigating soil samples. They were doing an activity that combined hands-on learning with the technology. Students were instructed to feel different soils and decide which type of soil each one was. After that, they had to drag the name of the specific type of soil to its correct number. Once they were finished, they recorded themselves talking about one of the soil samples. Pam, Ann, David, and Kelly all mentioned this specific activity during the interviews. Kelly said, "I like science a lot because […] it's just really fun like we did soil, and we had to, we got to touch soil and do it onto the iPad." When it was mentioned in the first focus group, Ann said that she thought the soil activity "was just really fun." Pam discussed the soil activity during her individual interview by saying, "I really like science when we did the – where you would feel the sand and stuff. I really liked that." These three students communicated with the researcher their positive perceptions of the incorporation of the application into their science activities.

Even though science was mentioned the most as a specific activity that was done with *Seesaw*, students and Mrs. Knope also mentioned completing the Scavenger Hunt from the very beginning of the year. This activity was done during the first week of the school year, and they were able to recall what they were required to do, which was to take a video tour of the classroom and tell a little bit about yourself. Pam's perception of this activity tended to be negative, but she also stated it was because it took her a while, and she had to "go back and do it

again" since she "did something wrong the first time." The participants also discussed videoing themselves reading their journals. This was an activity that the clinical teacher had them complete prior to data collection, but several students mentioned how they enjoyed recording their writing.

Using *Seesaw* and submitting work to *Seesaw* was something that took time. Both the teachers and the students discussed how it takes a long time. For the classroom teacher, it took her time to feel comfortable with the technology. She stated that she needed to have time to "play with it and figure that out" when she discussed having students go back and edit their submissions to *Seesaw.* The following is an excerpt from my teacher journal that I kept throughout the data collection period:

> When there is a lack of time, *Seesaw* is definitely not used as effectively. Since it's technology, it takes time to operate and for young children to complete tasks. However, with a sufficient amount of time, students can be very successful using *Seesaw* to complete tasks related to all content areas.

Even the students understood and mentioned that using the technology took time. Pam discussed that completing some of the activities on the iPad such as the Video Scavenger Hunt from the beginning of the year and typing words onto Notes in *Seesaw* took the most time. Ann agreed with Pam that typing words takes a long time because it was "hard to find the key on the iPad." However, Andy mentioned that having the chance to do activities on *Seesaw* gave you time to think. He seemed to enjoy that he was not feeling rushed by the technology.

Seesaw is can be used to support Daily 5 Rotations. Within our rotations, *Seesaw* was used during Guided Reading groups at my table and during Word Work. During Word Work, students were held accountable by Mrs. Knope by submitting the words that they had built or written during the time they were in Word Work. I observed that the students who submitted

their Word Work Note on *Seesaw* were the students who, when surveyed, showed a much more positive outlook on using the application. If a student mentioned reading books on *Seesaw* either in their interview or on their survey, it was always in a positive state. They loved being able to read their books on the application. Andy even knew the process of being able to read the books on the application, which included AirDrop and navigation through several screens in order to finally read the book. The most screenshots that were collected to analyze were uploaded to either Reading or Writing/Word Work. The use of *Seesaw* in Daily 5 Rotations was one of the strongest areas in the classroom.

Since Roosevelt Elementary School incorporates the *Leader in Me* program, submitting things to *Seesaw* related to this program was evident in the data. While there was only one student who mentioned Leadership Notebooks, Mrs. Knope and I both mentioned it in our forms of data. The following is an excerpt from my interview with Mrs. Knope:

> … that Leadership Notebook because that was the initial reason for the digital portfolio on *Seesaw*. And that's one I actually have to turn in at the end of the year, so I think that there's a lot of submitting leadership roles, and submitting … At the beginning of the year, there was a lot of submitting the goals. […] I feel like there's a lot of reflection and leadership for *Leader in Me.*

However, even though *Seesaw* provided a platform for submitting goals, and leadership roles for Leader in Me, Mrs. Knope reflected that it might not be the best suited tool for the task. She mentioned that using Google Drive or Google Classroom might be easier to continually edit throughout the year. She was not going to abandon using a digital portfolio for her Leadership Notebooks; she was just going to change avenues that she uses. Editing on *Seesaw* is not an easy task, according to Mrs. Knope. At the time of the interview, she was still investigating on how that would work on the application. However, students mentioned that they liked the idea of

being able to go back onto their submission and fix their mistakes that they had made. This gave Ann a lot of relief that she would be able to do this due to her nervousness of submitting something with a mistake.

The most interesting form of engagement that I discovered through the data was the mention of students being able to see their growth over the school year. This was not mentioned by Mrs. Knope, nor had I included anything about it in my teacher journal. The students enjoyed having the option to look back on their work to see how they have grown from the beginning to the middle to the end of the year. Two students, Andy and Pam, mentioned their writing skills. Andy mentioned how his lowercase a used to look at the beginning and how it's changed throughout the year and how he was able to use *Seesaw* to track that change. When asked how that made him feel, he said that it was "kind of cool because you're seeing different ways of writing." Pam mentioned how she enjoyed being able to look back in her writing journal and how that was relevant to looking back at her submissions to *Seesaw.* When asked how she felt about this, she said, "It makes me feel like good cause now how better I am at doing stuff like that." Tracking growth is something that was very valuable to these students, and that was obvious through the data collected.

Teacher's Role in Using *Seesaw* in the Classroom

The classroom teacher plays a vital role in both the setting up of the application and the implementation of *Seesaw*. In my interview with Leslie Knope, the classroom teacher, she mentioned the ability to organize work into folders that can be set up by the teacher, being able to have the option to share submissions with parents and giving grades and feedback to the students based on their submissions. However, several students mentioned that if it is not explicitly stated by either me or Mrs. Knope, they have a hard time remembering and knowing exactly what to do for the activities. Ann said, "you don't tell me." Pam said, "I sometimes

forget what to like do." Scaffolding the students proved to be critical for the use of technology, and without this scaffolding, students, like Ann, felt that they would be unsuccessful in their submissions. However, Ann also discussed an activity that she felt was explained well. The following is an interaction from her individual interview:

Ann: And the teachers had to show it and tell it how to do it. So we – so the class could know how to do it.

Drennan: Mmhmm. Do you think that we explained it well?

Ann: Yes!

The organization of the application is probably the most important part of the teacher's role in setting up the application. If Mrs. Knope had not taken the time to create a folder for each subject, all submissions would be in one big long journal. The folders allow both students and teachers to click on one folder and see everything that has been submitted to that specific folder. When asked about her creation of the folders, Mrs. Knope stated, "So that was kind of my way to have it organized better, so I know if they're submitting it for science, it goes in the science folder. So I have all the assignments that they have completed in Seesaw about science in the science folder." Another example was that all of the reading that was done on the application was submitted to the reading folder. Anything related to Leader in Me was submitted to the Leadership Notebook folder. Most students knew which folder to submit it to. Ann exhibited difficulties with which folder to submit her work to by saying, "I don't know which one to press. I have to like guess." Throughout the three-week data collection period, I only observed one student submitting their work to the wrong folder. However, on the teacher side, there was an option to change the folder that it was submitted to prior to approving the submission.

During the implementation of the application, the classroom teacher has to do a lot of scaffolding in order for students to be successful. At times, the teacher would take the students

step-by-step in the process where they could see what was expected. As previously stated, when scaffolding was limited or unclear, students felt as if they would not be successful or that they would not know what they should have done. Mrs. Knope stated that it was important to teach the skills to use the application prior to submitting content-related items. She did this through the Scavenger Hunt at the beginning of the year. She took the time to establish exactly how to take a picture, how to label, how to type, and how to take a video prior to ever expecting the students to submit content-related work. In fact, she said "I feel like it's harder if I would have taught them how to use *Seesaw* with the content that they're not sure about. That would have been too much confusion." This is why she decided to have an introduction to the application in the form of an activity that the students completed. Additionally, several of the interviewed students mentioned that without the teacher telling them exactly what to do or where to submit something, they would not know what to do. Ann mentioned that "the teacher has to tell you the steps for you to know what to do." Scaffolding the use of the application made the students more successful. In my teacher journal, I mentioned that if we had not mentioned the iPads or *Seesaw*, the students did not mention it either. This shows that while students enjoyed using the application, it still had to be introduced and scaffolded by the teacher.

When asked what Mrs. Knope and the clinical teacher used *Seesaw* for, several of the students mentioned it was for grading and looking at their submissions. Stanley, Kevin, Kelly and Andy discussed in their focus group that getting grades through *Seesaw* was much more fun than getting it on a piece of paper. Mrs. Knope described the grading portion of *Seesaw* as a way to give them feedback in a more direct way. However, both she and the clinical teacher spent time reflecting and trying to figure out the best way is to do that and have students correct their mistakes. She said, "I'm learning or trying to figure out what the best way, if I'm going to take a grade on something is." However, she did state the organization aspect of the application allowed

her to see if all of the students had submitted their assignments because she could click on the folder and see who was missing what.

Rather than giving parents full access to what their students are submitting, Mrs. Knope decided to utilize the ability to create QR codes from the submissions and send them home for parents to view. Mrs. Knope showed excitement for this option by saying, "I really like the idea that you can create QR codes from their work, so if it was a video, or we've made some class videos and uploaded them to *Seesaw*. That makes it a QR code that any person can scan that has that QR code." She had utilized it in different ways as well. This was done with the Guided Reading books and with some of the videos we have made as a class that Mrs. Knope mentioned specifically. This allowed parents to see what is happening in the classroom and what students were reading during Guided Reading. Mrs. Knope stated that she was not quite ready to turn the option of for parents to view a student's entire digital portfolio, but she was open to turning it on in the future.

Emotions and Attitudes Related to *Seesaw*

In general, students were excited to use *Seesaw* as a part of their learning. Prior to the interviews, I conducted a survey that gave me a brief overview of how students were perceiving the use of *Seesaw* in the classroom. In Figure 1, a bar graph is shown that details the amount of students that answered a certain way for each question. Overall, the majority of students selected I LOVE it! or I like it. for each question.

Knowing what I discovered from the surveys, I was interested in seeing the specific emotions and attitudes that the students had towards *Seesaw*. The teacher enjoyed the option to submit work with a verbal explanation or reflection by the students. For the most part, students' attitudes towards *Seesaw* were positive. Just like with all technology, difficulties arose such as

the logistics of getting the Guided Reading QR codes home with the students when there was limited time throughout the day and some of the functions of the application like typing.

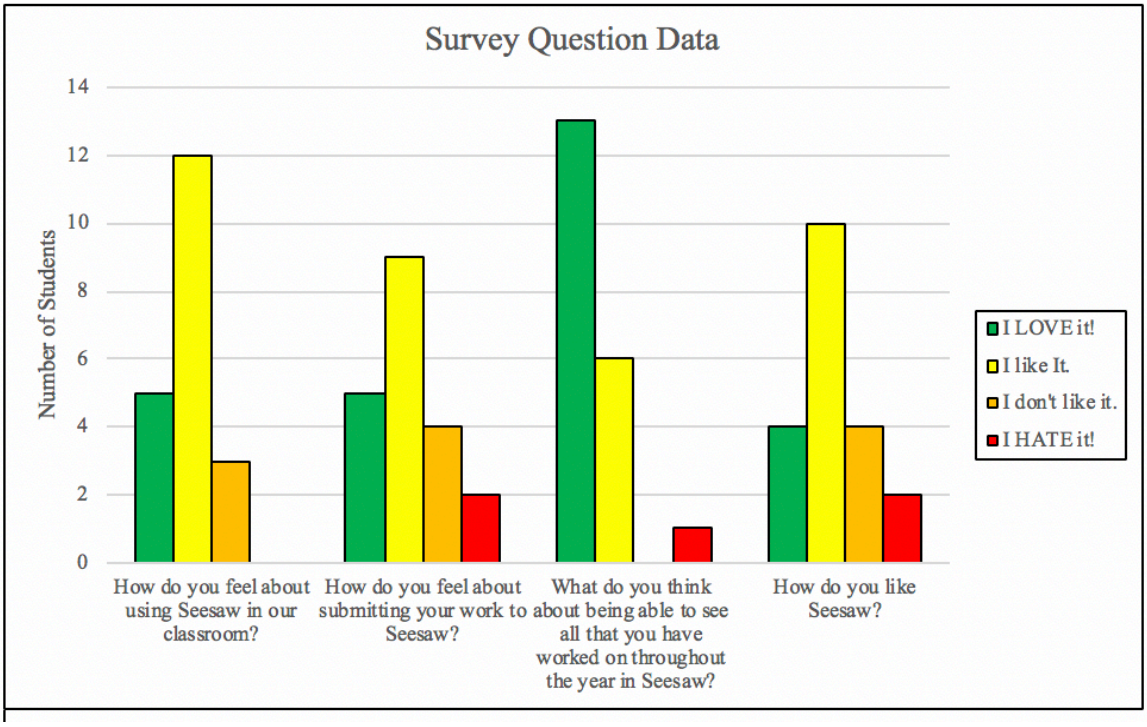

Figure 1. Bar graph detailing the quantitative data obtained from the survey questions.

The students never named that they were excited to use the application, but both Mrs. Knope and I were able to recognize that most students were excited based on their reactions and facial expressions while using the application. Many students mentioned that they thought *Seesaw* was cool or fun or that they really liked being able to use it. Ann admitted that she can be nervous or scared to submit something to *Seesaw*, but after further questioning, I realized it was because she was afraid to make mistakes. After she found out she could fix those mistakes, she stated it made her happy to have that opportunity. Students also mentioned that *Seesaw* is hard to understand at times, and for those reasons, they did not like it too much. Pam wrote on her survey, “I don’t like some of the activities because I don’t understand them.” This shows that if a student is confused or does not like a certain activity or subject, their perception is going to be on

the negative side. During the focus group, Pam mentioned that she did not understand everything that she had to do, but she still thought it was fun to use the application. There were mixed emotions and attitudes that were exhibited throughout the data; however, most emotions appeared to be positive.

Even with mixed emotions, students still mentioned *Seesaw* as a way to help them learn. Ann discussed exercising her brain while she used the application. Stanley stated that using *Seesaw* "helps you like remember stuff like on the water cycle thing." Pam concluded that learning on the iPad was much more fun. Mrs. Knope declared that using *Seesaw* was a way for students to learn well and be able to display their learning in a new way.

One of the most surprising themes found through the data was in regards to students' futures. During the focus group with Andy, Kelly, Kevin and Stanley, the students began mentioning how typing on *Seesaw* was actually helping them prepare for what they wanted to be when they grew up. Andy wanted to be an engineer and found typing to be very interesting because of that. Kevin wanted to help design video games and was able to recognize that typing is important for that job. Kevin also stated that "if you forgot about it, then when you're older, you won't know it so you – you'll probably like won't be that smart so you won't be able to get a job or anything." Other students related their use of *Seesaw* in first grade to how they might use it in older grades or in middle school and high school. These students enjoyed using the application in different ways because it was preparing them for their future. Their perceptions of the use of the digital portfolio proved to be positive because they discussed how they enjoyed learning how the keyboard works and how they have the ability to look back on their work. The like it because it is not only helping them learn, but it is preparing them for something that they want to do in the future.

Implications for Teachers

Today, our students are surrounded by technology. It is in their homes, in the restaurants they visit, at their friends' houses, and even in their hands. Why should we not bring it into the classroom? Based on this research, students appeared to be engaged with the technology, were able to recall lessons that *Seesaw* had been utilized with and exhibited positive perceptions when describing their interactions with the application. Using technology in the classroom, especially a digital portfolio, is valuable due to the ability to store all student work in one singular place, to the multiple ways to use *Seesaw* in the classroom, and to give students a chance to use technology to aide in their learning. Using some sort of digital portfolio is something that teachers should at least take the time to consider. Not only does having a digital portfolio set up make the stacks of paper smaller, it also creates an opportunity for students to engage in technology in a way that they might not usually do at home. Many of the students in the study mentioned how they liked using the application in different areas of their learning. *Seesaw* can be utilized for different things, and almost every different thing that the application was used for in this classroom, the students stated that they liked it.

While there is the challenge of using the technology to be time consuming, I believe the benefits outweigh that challenge. Students have the opportunity to express themselves through verbal reflection when recording their voice and submitting their own work that they complete on *Seesaw*. In my study, students appeared to be engaged in the learning when they were able to do it on the application. Teachers can sometimes find engagement to be a difficult task in the classroom due to external, as well as internal factors. Using a digital portfolio such as *Seesaw* helps to engage the students in a novel way. Most of the time, students have not used a digital portfolio before to document their learning. None of our students in our class had done this in kindergarten, so it was brand new and exciting to those students. The students in this study were

experiencing something that was new to them, and this made these students excited to use the technology, which caused positive perceptions to emerge.

While this study did show that in general, students have positive perceptions about the use of a digital portfolio in the classroom, it did not explicitly study student engagement in lessons and ability to recall lessons. Students were able to mention it, but there was no pre-test and post-test to prove that the implementation of the digital portfolio increased this engagement and lesson recall. Additional studies should be done to discover if the use of *Seesaw* specifically truly increases student engagement and lesson recall.

I would challenge all teachers to take a look at the digital portfolios available. *Seesaw* may not work for all teachers, and that is okay. Mrs. Knope was able to identify that using *Seesaw* for her Leadership Notebooks was not running the way that she wanted it to, so she has made the decision for next year to switch that part of her digital portfolio to Google Drive. There are so many options in the tech world for digital portfolio avenues. *Seesaw* worked for me and my teaching style, so I will continue to use it with my students next year. My biggest piece of advice is to try it. A digital portfolio may not work for every teacher, but my research showed that students had generally positive perceptions about the use of *Seesaw.* The students enjoyed being able to look back on their work that they had done throughout the year. Students were also excited to use the application because it was something they had not done before. Each set of students is different, so what works for this group of students may not work for the next group of students. Implementing a digital portfolio can be nerve-wracking. Even Mrs. Knope stated that she was nervous at first when she implemented *Seesaw*. However, she took the time and figured out what worked for her and her students and discovered that students were excited about the learning, and they were more engaged and successful through the use of the application.

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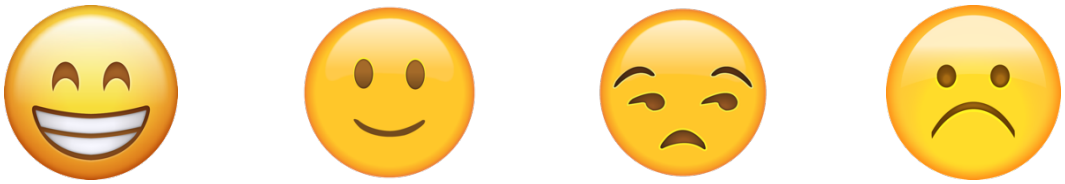
Appendix A

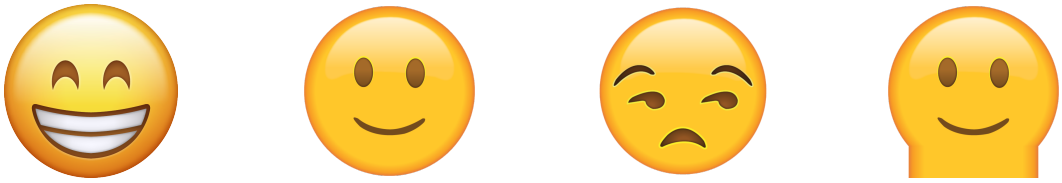
Student Survey

1. How do you feel about using *Seesaw* in our classroom?



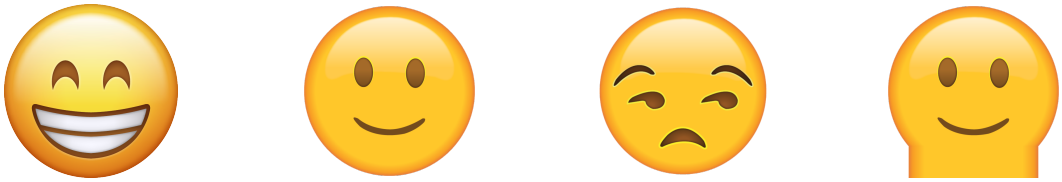
I LOVE it! I like it. I don't like it. I HATE it!

2. How do you feel about submitting your work to *Seesaw*?



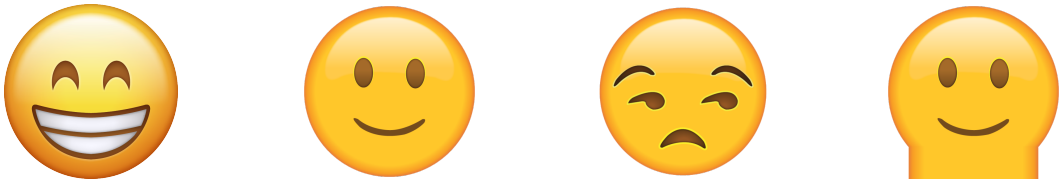
I LOVE it! I like it. I don't like it. I HATE it!

3. What do you think about being able to see all that you have worked on throughout the year in *Seesaw*?



I LOVE it! I like it. I don't like it. I HATE it!

4. How do you like *Seesaw*?



I LOVE it! I like it. I don't like it. I HATE it!

5. Write a sentence about what you like or don't like about using *Seesaw* in the classroom.

Survey Question Data

Student	Question 1	Question 2	Question 3	Question 4	Score	Key	
Ann	I like it.	I don't like it.	I like it.	I like it.	11	I LOVE it!	4
Ron	I like it.	I HATE it!	I LOVE it!	I don't like it.	10	I like it.	3
Jim	I LOVE it!	I like it.	I like it.	I like it.	13	I don't like it.	2
Frank	I like it.	I don't like it.	I LOVE it!	I like it.	12	I HATE it!	1
Kevin	I LOVE it!	I LOVE it!	I LOVE it!	I LOVE it!	16		
Oscar	I LOVE it!	I like it.	I LOVE it!	I HATE it!	12		
Michael	I like it.	I like it.	I like it.	I like it.	12		
Pam	I don't like it.	I like it.	I like it.	I don't like it.	10		
Dwight	I don't like it.	I like it.	I LOVE it!	I HATE it!	10		
Angela	I like it.	I LOVE it!	I like it.	I don't like it.	12		
Kelly	I LOVE it!	I LOVE it!	I LOVE it!	I LOVE it!	16		
Erin	I don't like it.	I HATE it!	I LOVE it!	I like it.	10		
Stanley	I like it.	I LOVE it!	I LOVE it!	I like it.	14		
Meredith	I like it.	I don't like it.	I LOVE it!	I LOVE it!	13		
Toby	I LOVE it!	I LOVE it!	I LOVE it!	I like it.	15		
Darryl	I like it.	I like it.	I LOVE it!	I like it.	13		
Andy	I like it.	I like it.	I LOVE it!	I LOVE it!	14		
Gabe	I like it.	I like it.	I like it.	I like it.	12		
Karen	I like it.	I don't like it.	I LOVE it!	I like it.	12		
David	I like it.	I like it.	I HATE it!	I don't like it.	9		

Appendix B

Codebook

Code Name	Level of the Code	Description of Code	Example
Emotions and attitudes related to *Seesaw*	2	General negative and positive views related to using the *Seesaw* application	"I'm kind of scared to submit it." "…your brain's exercising." "I think it's easy."
Learning Aide	1	*Seesaw* is used as a way to aide in student learning	"And it like helps you like remember stuff like on the water cycle"
Verbal Reflection and Explanation	1	Utilizing the recording and videoing aspect of the *Seesaw* application	"…the digital portfolio has the video capabilities and getting to hear their voices is a piece that I think is super valuable with the digital portfolios that were not in a paper copy."
Excitement to use the Application	1	Student and teacher excitement in using the application	"The students who worked on the *Seesaw* activity showed interest and excitement in being able to use the iPad when investigating soil samples."
Difficulties with the technology	1	Any kind of difficulty or problems that students and teachers encountered throughout the data	"The only downside is getting the books home with the students to read since we are not printing them off, only using *Seesaw*."
Application to future	1	Places where students and teachers directly related what they are doing in *Seesaw* to their future	"…cause I think when I grow up, I want to be an engineer and I and I want to figure out how the keyboard works."
Attitude when using *Seesaw*	1	Overall (negative or positive) attitude in relation to using *Seesaw*	"Their eyes light up when we get to read on the application."
Engagement with the activities available	2	Overall engagement while using the apps – both negative and positive	"They tend to read the book much more quickly than they do with just a paper copy."
Student growth over the school year	1	Recognizing students' growth from the beginning of the year to the end of the year	"…you get to see how good you were at the beginning at like doing stuff and you get to see like how much you have learned and stuff."
Specific activity done with *Seesaw* using Lesson Recall	1	Lessons and activities done through *Seesaw* that students and teachers were able to recall during the data collection	"We started the year off teaching them how to use *Seesaw* thought a scavenger hunt around the classroom…"

Using the application during Daily 5 Rotations	1	Students and teachers using the application as a supplement to their Daily 5 Rotation time	"I like the reading too because we read like really cool books like Yellowstone and the Grand Canyon. Those are really cool."
Leader in Me connection	1	Bringing in the piece related to Leader In Me, the program that the school has adopted	"…also that Leadership Notebook because that was the initial reason for the digital portfolio on *Seesaw* […] there's a lot of submitting leadership roles, and submitting […] goals."
Perception influences use	1	A student's perception of concept and of the application influences the use of the application	"…if we're struggling in math and the math assignment is hard, then they have a hard time maybe on that *Seesaw* thing or assignment."
Ability to edit	1	Being able to edit and revise submissions to *Seesaw*	"…I could see the mistakes I could make and then fix them all over agin."
Teacher's role in using *Seesaw*	2	What is the teacher doing throughout the *Seesaw* process?	"…she uses it to show us what to do and how to do it."
Organization of *Seesaw*	1	How the teacher has organized *Seesaw* with folders in relation to specific subjects	"*Seesaw* has options to create folders so I could do a leadership portfolio, a writing portfolio, a social studies, science, math portfolio…"
Scaffolding from teacher	1	Teacher's aide in keeping students on task and how to do the tasks in *Seesaw*	"…that you needed to teach those skills without the content."
Sharing student submissions with parents	1	The opportunity to share specific activities with the student's parents	"That it makes a QR code that any person can scan that has that QR code. So we've sent it to the parents and then it doesn't actually give them full access to everything on their *Seesaw* account."
Receiving grades and feedback for work done in *Seesaw*	1	Teacher giving grades and feedback through the submissions done by students in *Seesaw*	"…and the teachers check if you do a good job. That 's when you get a good grade in your grade book.
Interactions with the technology	2	How are the students interacting with the actual technology and the application?	"… just doing it on a computer instead of the paper." "Add something is more plain." "…tap things, move them around and type."
Digital versus paper	1	The comparison of using a digital format instead of a paper portfolio	"I like writing in my normal journal more."

Specific function in *Seesaw*	1	Recording, typing, drawing, and labeling that can be done in *Seesaw*	"Take a picture of yourself. Give a tour of the classroom. Practice the video. Things like that."
Working with the technology	1	Different ways to work with the technology such as using the iPad, or the actual movement from application to submitting it	"I wanted to do some more technology integration in the classroom."
All in one place	1	Everything that is submitted and worked on has the capability to be in one singular place	"…it's all year long held evidence for me."
Versatility of *Seesaw*	1	The ability for *Seesaw* to be utilized in many different ways	"We utilize *Seesaw* in many different ways in here. I feel like throughout the year, we've kind of tried some different thngs."
Technology-specific language	1	Students and teachers using specific language related to using the technology and the application	"I think you use *Seesaw* to maybe help AirDrop cause sometimes you – you AirDrop something to us and we have to do – you hit Files, and then we have to go to Files on *Seesaw*…"
"It takes a lot of time"	1	The amount of time (sometimes more, sometimes less) that it takes to complete tasks on *Seesaw*	"When there is a lack of time, *Seesaw* is definitely not used as effectively."